

Claims

1. A zoom lens of the type having a plurality of lens groups and varying in power in response to variation in intervals between the lens groups, which comprises a reflecting member to bend the optical axis passing through the lens groups and a last lens group (counted from the object side) which is composed of a negative lens group and a positive lens group, with an air layer interposed between them (arranged sequentially from the object side).

2. The zoom lens as defined in Claim 1, wherein the lens groups are constructed such that the first lens group (counted from the object side) is stationary and contains said reflecting member.

3. The zoom lens as defined in Claim 1, wherein the lens groups are constructed such that last lens group (counted from the object side) has a negative refracting power.

4. A zoom lens of the type having a plurality of lens groups and varying in power in response to variation in intervals between the lens groups, which comprises a last lens group (counted from the object side) which is composed of a negative lens group and a positive lens group, with an air layer interposed between them (arranged sequentially

from the object side).

5. The zoom lens as defined in Claim 1, wherein the lens groups are composed of five lens groups.

6. The zoom lens as defined in Claim 4, wherein the lens groups are composed of five lens groups.

7. The zoom lens as defined in Claim 1, wherein the negative lens group of the last lens group satisfies the condition defined by the inequality (1) below.

$$0.9 < |f_a/f_w| < 1.25$$

where, f_a denotes the focal length of the negative lens group in the last lens group, and f_w denotes the focal length at its wide end.

8. The zoom lens as defined in Claim 4, wherein the negative lens group of the last lens group satisfies the condition defined by the inequality (1) below.

$$0.9 < |f_a/f_w| < 1.25$$

where, f_a denotes the focal length of the negative lens group in the last lens group, and f_w denotes the focal length at its wide end.

9. An imaging device equipped with a zoom lens having a plurality of lens groups and varying in power in response to variation in intervals between the lens groups and also

equipped with an imaging element to convert the optical images formed by said zoom lens into electrical signals, wherein said zoom lens comprises a reflecting member to bend the optical axis and a last lens group (counted from the object side) which is composed of a negative lens group and a positive lens group, with an air layer interposed between them (arranged sequentially from the object side).

10. The imaging device as defined in Claim 9, wherein the lens groups are constructed such that the first lens group (counted from the object side) is stationary and contains said reflecting member.

11. The imaging device as defined in Claim 9, wherein the lens groups are constructed such that last lens group (counted from the object side) has a negative refracting power.

12. An imaging device equipped with a zoom lens having a plurality of lens groups and varying in power in response to variation in intervals between the lens groups and also equipped with an imaging element to convert the optical images formed by said zoom lens into electrical signals, wherein said zoom lens comprises a last lens group (counted from the object side) which is composed of a negative lens group and a positive lens group, with an air layer interposed between them (arranged sequentially from

the object side).

13. The imaging device as defined in Claim 9, wherein the lens groups are composed of five lens groups.

14. The imaging device as defined in Claim 12, wherein the lens groups are composed of five lens groups.

15. The imaging device as defined in Claim 9, wherein the negative lens group of the last lens group satisfies the condition defined by the inequality (1) below.

$$0.9 < |f_a/f_w| < 1.25$$

where, f_a denotes the focal length of the negative lens group in the last lens group, and f_w denotes the focal length at its wide end.

16. The imaging device as defined in Claim 12, wherein the negative lens group of the last lens group satisfies the condition defined by the inequality (1) below.

$$0.9 < |f_a/f_w| < 1.25$$

where, f_a denotes the focal length of the negative lens group in the last lens group, and f_w denotes the focal length at its wide end.